UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/781,453	02/13/2001	Norihiko Nakagawa	1155-0215P	1019

2292 7590 03/25/2002

BIRCH STEWART KOLASCH & BIRCH
PO BOX 747
FALLS CHURCH, VA 22040-0747

EXAMINER
SHOSHO, CALLIE E

ART UNIT	PAPER NUMBER
1714	4

DATE MAILED: 03/25/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

MF=4

Office Action Summary	Application No.	Applicant(s)	
	09/781,453	NAKAGAWA ET AL.	
	Examiner	Art Unit	
	Callie E. Shosho	1714	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *13 February 2001* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-8* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-8* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *2* .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

DETAILED ACTION

1. It is noted that the pre-amendment filed 2/13/01 instructs that on page 11, line 7 to delete "the", the second occurrence. However, this has not been entered given that no such language appears in line 7. Did applicants mean to amend line 6?

Double Patenting

2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington,* 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

3. Claim 4 is rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1 of U.S. Patent No. 6,214,447 (Nakagawa et al.) alone, or alternatively, in view of *Textbook of Polymer Science*. Although the conflicting claims are not identical, they are not patentably distinct from each other because of the following explanation.

Prior to setting forth the rejection, it is noted that the present application is a divisional of U.S. 6,214,447. While a double patenting rejection is not permitted where the claimed subject matter is presented in a divisional application as a result of a restriction requirement made in the parent application, the prohibition does not apply when the divisional application was voluntarily filed by the applicant and not in response to an Office requirement for restriction (see MPEP 804 and 804.01). Thus, the following double patenting rejection is proper given that the present divisional application, 09/781,453 is not the result of a restriction requirement in the parent application, U.S. Serial Number 09/056,090 which is now U.S. 6,214,447 (Nakagawa et al.).

There is significant overlap between the claim 1 of Nakagawa et al. and present claim 4. In fact, claim 1 of Nakagawa et al. is identical to that present claim 4 with the exception that present claim 4 requires that the low-density polyethylene is "obtainable by high pressure processes".

On the one hand, the broad disclosure of low-density polyethylene by Nakagawa et al. clearly encompasses the use of all types of polyethylene including those obtainable by high-pressure process. As evidence to support this position, applicants' attention is drawn to MPEP 804 where it is disclosed that "the specification can always be used as a dictionary to learn the meaning of a term in a patent claim." *In re Boylan*, 392 F.2d 1017, 157 USPQ 370 (CCPA

1968). Further, those portions of the specification which provide support for the patent claims may also be examined and considered when addressing the issue of whether a claim in an application defines an obvious variation of an invention claimed in the patent (underlining added by examiner for emphasis), *In re Vogel*, 422 F.2d 438,164 USPQ 619,622 (CCPA 1970).

Consistent with the above underlined portion of the MPEP citation, attention is drawn to col.8, lines 33-35 of Nakagawa et al. where it is disclosed that it is conventional to produce the low-density polyethylene by a high-pressure process.

In light of the above, it therefore would have been obvious to one of ordinary skill in the art to obtain low-density polyethylene from high-pressure process, and thereby arrive at the claimed invention.

On the other hand, *Textbook of Polymer Science* (pages 361-365) disclose that it is well known to produce low-density polyethylene by high-pressure process (page 362) in order to control the properties of the polyethylene such as stiffness, strength, chemical resistance, toughness, permeability, etc. which depend on the molecular weight and degree of branching of polyethylene produced by such process (pages 364-365).

In light of the disclosure of *Textbook of Polymer Science* that it is well known to produce low-density polyethylene by high pressure process, it therefore would have been obvious to one of ordinary skill in the art to use high pressure process in obtaining the low-density polyethylene of Nakagawa et al. in order to produce polyethylene with desired properties, and thereby arrive at the claimed invention.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1-8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

(a) Claim 1, line 4 and claim 5, line 3 each recite that the low-density polyethylene is "obtainable" by high-pressure processes. The scope of the claim is confusing in light of the use of the phrase "obtainable" because it is not clear whether the low-density polyethylene must actually be obtained using a high-pressure process or if it is only necessary that the polyethylene is capable of being obtained from a high-pressure process. Clarification is requested.

(b) Claim 1, lines 9-10 recites that "...melt flow rate (measured at 230 ^{0}C under a load of 2.16 kg in accordance with ASTM D 1238).." The scope of the claim is confusing in light of the use of the parentheses because it is not clear if the melt flow rate is actually measured under these conditions or not. It is suggested that the parentheses are removed. A similar suggestion is also made in claim 1, lines 18-19 and claim 2, lines 17-18 which also use such parentheses .

(c) Claim 3 when reciting the groups for substituent Y also recites "(provided that R^5 represent a hydrogen atom, a halogen atom, a hydrocarbon atom, ..., or a halogenated hydrocarbon group having 1 to 20 carbon atoms)". The scope of the claim is confusing because of the use of the parentheses and further because it is not clear what is meant by "provided that". When is it provided that R^5 is the recited groups? If the language is used merely to recite the R^5

groups, it is suggested that the phrase is re-written as "wherein R^5 represents a hydrogen atom, a halogen atom, a hydrocarbon atom, ..., or a halogenated hydrocarbon group having 1 to 20 carbon atoms".

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later

invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claims 1-5 and 7-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over EP 716121 in view of Sadatoshi et al. (U.S. 5,340,878) and Yamamoto et al. (U.S. 5,656,696).

EP 716121 discloses a composition comprising 5-95% propylene/1-butene random copolymer which is characterized in that the copolymer contains (i) 50-95 mol% propylene and 5-50 mol% 1-butene, (ii) molecular weight distribution M_w/M_n of not more than 3, (iii) B value of 1-1.5, (iv) melting point of 60-140 ^{0}C wherein the melting point satisfies the relationship $-2.6M + 130 < T_m < -2.3M + 155$ where M is the mol% of 1-butene present in the copolymer, and (v) degree of crystallinity measured by x-ray diffractometry of satisfying the relationship $C > -1.5M + 75$ where M is the mol% of 1-butene present in the copolymer. The propylene/1-butene copolymer is obtained by copolymerizing propylene and 1-butene in the presence of olefin polymerization catalyst wherein the catalyst comprises transition metal compound identical to that presently claimed and an organoaluminum oxy compound and/or a compound capable of reacting with transition metal compound to form an ion pair. The composition also comprises additives such as inorganic filler, antioxidant, antistatic agent, lubricant, UV absorber, etc. There is also disclosed a composite film comprising a substrate layer and laminated onto one side a resin layer obtained from the above composition wherein the resin layer has thickness of 0.1-50 μm (page 2, lines 28-31 and 33-36, page 2, line 40-page 3, line 35, page 3, lines 42 and 45-46, page 4, lines 46-47 and 54-58, page 5, lines 1-32, page 9, line 7-page 10, line 58, page 18, lines 16-17 and 26-29, page 21, line 37, page 22, lines 19-25, and page 24, lines 20-22).

The difference between EP 716121 and the present claimed invention is the requirement in the claims of (a) melt flow rate of propylene/1-butene copolymer and (b) low-density polyethylene obtainable from high-pressure process.

With respect to difference (a), EP 716121 is silent with respect to the melt flow rate of the propylene/1-butene copolymer.

Sadatoshi et al., which is drawn to composition comprising propylene/1-butene copolymer and ethylene/α-olefin copolymer, disclose the use of propylene/1-butene copolymer having melt flow rate of 3-50 g/10min in order to produce a copolymer which has suitable transparency and workability wherein the melt flow rate is measured according to JIS K7210 (col.2, lines 41-44, 51-53, and 55-56 and col.4, lines 45-48). It is noted, as found in state-of-the-art references such as Nohara et al. (U.S. 5,891,946), that JIS K7210 standard is equivalent to ASTM D 1238 standard as presently claimed (col. 12, lines 28-31).

With respect to difference (b), EP 716121 discloses the use of polyethylene, however, there is no explicit disclosure of low-density polyethylene obtainable from high-pressure process as presently claimed.

Yamamoto et al., which is drawn to resin composition, disclose the use of 1-50% high-pressure low-density polyethylene which has melt flow rate of 10-50 g/10 min according to JIS K7210 at 190 ^{0}C and 2.16 kg and density of 0.918-0.927 g/cm^{3} wherein such polyethylene is used in order to produce a composition with good moldability, excellent transparency and excellent impact strength (col.1, lines 57-63 and col.6, lines 20-53). It is noted, as found in state-of-the-art references such as Nohara et al. (U.S. 5,891,946), that JIS K7210 standard is equivalent to ASTM D 1238 standard as presently claimed (col. 12, lines 28-31).

In light of the motivation for using propylene/1-butene copolymer with specific melt flow rate disclosed by Sadatoshi et al. and the motivation for using high-pressure low-density polyethylene disclosed by Yamamoto et al. as described above, it therefore would have been obvious to one of ordinary skill in the art to use such propylene/1-butene and high-pressure low-density polyethylene in the composition of EP 716121 in order to produce a composition with good transparency, workability, and impact strength, and thereby arrive at the claimed invention.

9. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over EP 716121 in view of Sadatoshi et al. and Yamamoto et al. as applied to claims 1-5 and 7-8 above, and further in view of Yoshimura et al. (U.S. 5,443,765).

The difference between EP 716121 in view of Sadatoshi et al. and Yamamoto et al. and the present claimed invention is the requirement in the claims of specific type of high-pressure low-density polyethylene.

Yoshimura et al., which is drawn to composite film, disclose the use of high-pressure low-density ethylene/C_3-C_{12} a-olefin copolymer which has melt flow rate of 0.2-15 g/10 min measured using ASTM D 1238 conditions and density of 0.89-0.935 g/cm^3. The motivation for using such polyethylene is due to its excellent stretchability, softness, and strength (col.11, lines 20-21, 25, and 57, col.12, lines 3-16, and col.32, line 22).

In light of the motivation for using specific high-pressure low-density polyethylene disclosed by Yoshimura et al. as described above, it therefore would have been obvious to one of ordinary skill in the art to use such polyethylene in the composition of EP 716121 in order to

produce a composition with excellent stretchability, softness, and strength, and thereby arrive at the claimed invention.

10. Claims 1-3, 5, and 7-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sugano et al. (U.S. 5,468,781) in view of EP 716121 and Yamamoto et al. (U.S. 5,656,696).

Sugano et al. disclose composition comprising 100 parts propylene/1-butene random copolymer which comprises 0.1-25% 1-butene and possesses melt flow rate measured using ATSM D 1238 at 230 ^{0}C and 2.16 kg of 0.1-50 g/10 min,1-50 parts high-pressure low-density polyethylene, and less than 5 parts additives such as antioxidant, antistatic agent, and UV absorber. Based on the above amounts, it is calculated that the composition comprises approximately 67-99% (100/150-100/101) propylene/1-butene and 0.99-33% (1/101-50/150) high-pressure low-density polyethylene. The propylene/1-butene copolymer is obtained by copolymerizing propylene and 1-butene in the presence of olefin polymerization catalyst comprising transition metal compound identical to that presently claimed such as dimethyl silylene bis(2-methyl-4-phenylindenyl) zirconium chloride and compound such as alumoxane or Lewis acid which is capable of reacting with the transition metal compound to form an ion pair (col.2, line 50-col.3, line 28, col.3, lines 48-49, col.5, lines 4-10 and 24-28, col.5, line 66-col.6, line 3, and col.6, lines 13 and 21-23).

The difference between Sugano et al. and present claimed invention is the requirement in the claims of (a) molecular weight distribution, B value, melting point, and crystallinity of propylene/1-butene copolymer, (b) density and melt flow rate of high-pressure low-density polyethylene, and (c) filler.

With respect to difference (a), EP 716121, which is drawn to polypropylene composition, disclose the use of propylene/1-butene random copolymer characterized in that the copolymer has (i) molecular weight distribution M_w/M_n of not more than 3, (ii) B value of 1-1.5, (iii) melting point of 60-140 ^{0}C wherein the melting point satisfies the relationship $-2.6M + 130 < T_m < -2.3M + 155$ where M is the mol% of 1-butene present in the copolymer, and (iv) degree of crystallinity measured by x-ray diffractometry of satisfying the relationship $C > -1.5M + 75$ where M is the mol% of 1-butene present in the copolymer. The motivation for using such copolymer is to produce a composition excellent in heat resistance and low temperature sealing properties as well as flexibility and impact resistance (col.2, lines 4-7, col.4, lines 54-58, and col.5, lines 1-5 and 18-31).

With respect to difference (b), Yamamoto et al., which is drawn to resin composition, disclose the use of high-pressure low-density polyethylene which has melt flow rate of 10-50 g/10 min according to JIS K7210 at 190 ^{0}C and 2.16 kg wherein if the melt flow rate is too high, the impact strength is impaired while if the melt flow rate is too low, the spiral flow is impaired and density of 0.918-0.927 g/cm^3 wherein if the density is too high, the transparence is impaired and if the density is too low, blocking occurs (col.6, lines 20-53). It is noted, as found in state-of-the-art references such as Nohara et al. (U.S. 5,891,946), that JIS K7210 standard is equivalent to ASTM D 1238 standard as presently claimed (col. 12, lines 28-31).

In light of the motivation for using specific propylene/1-butene copolymer and high-pressure low-density polyethylene disclosed by EP 716121 and Yamamoto et al., respectively, it therefore would have been obvious to one of ordinary skill in the art to use such specific propylene/1-butene copolymer and high-pressure low-density polyethylene in the composition of

Sugano et al. in order to produce a composition with excellent in heat resistance, low temperature sealing properties, flexibility and impact resistance as well as good impact strength, spiral flow, transparency, and anti-blocking resistance, and thereby arrive at the claimed invention.

With respect to difference (c), EP 716121 discloses the use of inorganic filler in order to produce a composition which is excellent in weld strength, paintability, and molding processability (col.21, line 37-col.22, line 4).

In light of the motivation for using inorganic filler disclosed by EP 713121 as described above, it therefore would have been obvious to one of ordinary skill in the art to use such filler in the composition of Sugano et al. in order to produce a composition with excellent weld strength, paintability, and molding processability, and thereby arrive at the claimed invention.

11. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sugano et al. in view of EP 716121 and Yamamoto et al. as applied to claims 1-3, 5, and 7-8 above, and further in view of Yoshimura et al. (U.S. 5,443,765).

The difference between Sugano et al. in view of EP 716121 and Yamamoto et al. and the present claimed invention is the requirement in the claims of specific type of high-pressure low-density polyethylene.

Yoshimura et al., which is drawn to composite film, disclose the use of high-pressure low-density ethylene/C_3-C_{12} a-olefin copolymer which has melt flow rate of 0.2-15 g/10 min measured using ASTM D 1238 conditions and density of 0.89-0.935 g/cm^3. The motivation for

using such polyethylene is due to its excellent stretchability, softness, and strength (col.11, lines 20-21, 25, and 57, col.12, lines 3-16, and col.32, line 22).

In light of the motivation for using specific high-pressure low-density polyethylene disclosed by Yoshimura et al. as described above, it therefore would have been obvious to one of ordinary skill in the art to use such polyethylene in the composition of Sugano et al. in order to produce a composition with excellent stretchability, softness, and strength, and thereby arrive at the claimed invention.

12. Claims 1-2 and 4-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sadatoshi et al. (U.S. 5,340,878) in view of Sugano et al. (U.S. 5,468,781) and EP 716121.

Sadatoshi et al. disclose composition comprising 100 parts propylene/1-butene random copolymer which comprises 2-30% 1-butene and possesses melt flow rate measured using ATSM D 1238 at 230 ^{0}C and 2.16 kg of 3-50 g/10 min and molecular weight distribution, M_w/M_n of less than 4.5, 0.01-4 parts ethylene/α-olefin copolymer which has melt flow rate of 0.5-300 g/10 min measured using JIS K7210 and density of at least 0.91 g/cm^3, and additives such as antioxidant, neutralizing agent, lubricant, and antistatic agent. Based on the above amounts it is calculated that the composition comprises approximately 96-99.9 (100/104-100/100.01) propylene/1-butene and 0.01-3.8% (0.01/100.01-4/104) ethylene/α-olefin copolymer. It is further disclosed that the composition is used to form a layer of a composite film wherein the layer has thickness of 10-100 μm (col.2, lines 37-44, 55-57, and 64-65, col.3, lines 5-11, 41-43, col.4, lines 12-16, col.4, lines 22-28 and 44-48, and example 4, Table 3). It is noted,

as found in state-of-the-art references such as Nohara et al. (U.S. 5,891,946), that JIS K7210 standard is equivalent to ASTM D 1238 standard as presently claimed (col. 12, lines 28-31).

Although there is no explicit disclosure that the polyethylene is obtainable from high-pressure process, it is well known as found in Sugano et al. that low-density polyethylene is obtainable from high-pressure processes (col.6, lines 12-13).

The difference between Sadatoshi et al. and the present claimed invention is the requirement in the claims of (a) B value, melting point, and crystallinity of propylene/1-butene copolymer and (b) filler.

With respect to difference (a), EP 716121, which is drawn to polypropylene composition, disclose the use of propylene/1-butene random copolymer characterized in that the copolymer has(i) B value of 1-1.5, (ii) melting point of 60-140 ^{0}C wherein the melting point satisfies the relationship $-2.6M + 130 < T_m < -2.3M + 155$ where M is the mol% of 1-butene present in the copolymer, and (iii) degree of crystallinity measured by x-ray diffractometry of satisfying the relationship $C > -1.5M + 75$ where M is the mol% of 1-butene present in the copolymer. The motivation for using such copolymer is to produce a composition excellent in heat resistance and low temperature sealing properties as well as flexibility and impact resistance (col.2, lines 4-7 and col.5, lines 1-5 and 18-31).

In light of the motivation for using specific propylene/1-butene copolymer disclosed by EP 716121, it therefore would have been obvious to one of ordinary skill in the art to use such specific propylene/1-butene copolymer in the composition of Sadatoshi et al. in order to produce a composition with excellent heat resistance, low temperature sealing properties, flexibility and impact, and thereby arrive at the claimed invention.

With respect to difference (b), EP 716121 discloses the use of inorganic filler in order to produce a composition which is excellent in weld strength, paintability, and molding processability (col.21, line 37-col.22, line 4).

In light of the motivation for using inorganic filler disclosed by EP 713121 as described above, it therefore would have been obvious to one of ordinary skill in the art to use such filler in the composition of Sadatoshi et al. in order to produce a composition with excellent weld strength, paintability, and molding processability, and thereby arrive at the claimed invention.

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Hozumi et al. (U.S. 6,084,048) disclose composition comprising propylene/1-butene copolymer and polyethylene wherein the copolymer has molecular weight distribution and amount of 1-butene as presently claimed, however, there is no disclosure of B value, melt flow rate, melting temperature, or crystallinity of the copolymer and no disclosure of the melt flow rate and density of the polyethylene as presently claimed.

Nishio et al. (U.S. 6,001,455) disclose composition comprising polyethylene with melt flow rate and density overlapping those presently claimed and propylene/1-butene copolymer, however, the copolymer has melt flow rate of greater than 100 g/10 min which falls outside the scope of the present claims.

Arai et al. (U.S. 5,032,620) disclose composition comprising propylene/1-butene copolymer and high-pressure low-density polyethylene wherein the copolymer has melt flow rate and amount of 1-butene as presently claimed, however, there is no disclosure of B value, melting

temperature, or crystallinity of the copolymer and no disclosure of the melt flow rate and density of the polyethylene as presently claimed.

Nohara et al. (U.S. 5,891,946) disclose the equivalence and interchangeability of ASTM D 1238 and JIS K7210.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Callie E. Shosho whose telephone number is 703-305-0208. The examiner can normally be reached on Monday-Friday (6:30-4:00) Alternate Fridays Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on 703-306-2777. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

Callie E. Shosho
Examiner
Art Unit 1714

Callie Shosho

Callie Shosho
March 18, 2002